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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/628,379 | 07/29/2003 | Junji Okada | 116692 | 4321 |
| 25944 | 7590 | 04/11/2005 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | LIN, TINA M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |
| DATE MAILED: 04/11/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,379

Applicant(s)

OKADA ET AL.

Examiner

Tina M. Lin

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-11, 14-17, 20-23 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 12, 13, 18, 19, 24, 25, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/29/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The disclosure is objected to because of the following informalities: On page 8, line 5 of the Specification, Applicant appears to be equating the rate of dimensional variation due to water absorption to the water rate absorption, however, the Examiner believes the properties are two different types of properties. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, 8, 11, 14, 17, 20, 23, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,856,735 to Chang et al. Chang et al discloses an assembly comprising optical elements, a substrate and embedded waveguides where the waveguides are doped silica embedded in undoped silica. (Figure 1)

But Chang et al fails to disclose the relationships of the properties between the lightguides and the substrate. However, the substrate and the lightguides are both made of silica. Since both elements are the same material, the properties of the elements would have the same relationship. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the same relationship of properties between the lightguides and the substrate since they are both made of the same material, silica.

Claims 3, 9, 15, 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,856,735 to Chang et al. Chang et al discloses all discussed above but fails to disclose the optical elements to be held in a package and arranged on the substrate. However, Figures 7a and 7b show the waveguide tap coupler to be combined with other waveguide elements to construct a waveguide device. Chang et al further discloses any suitable element may be formed with the tap coupler to form a single waveguide multipurpose device. Since Chang et al discloses the tap coupler to be used for multiple purposes and Figures 7a and 7b show the elements in a single waveguide chip, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have placed the optical elements on a substrate and held in a package.

Claims 4, 10, 16, 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,856,735 to Chang et al. Chang et al discloses all discussed above but fails to disclose the package to be in the form of a connector is plug. However, Chang et al discloses a demultiplexer and a tap coupler to be formed on the package. Furthermore, since the demultiplexer and tap coupler both have an input and an output, another optical element can be connected to them, thereby allowing the demultiplexer and the coupler to be used as a connector. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have been able to use the waveguide chip that has a demultiplexer and coupler formed on it as an optical connector.

Allowable Subject Matter

Claims 6, 12, 18, 24 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of

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the base claim and any intervening claims. The prior art of record fails to disclose or reasonably suggest an optical transmission device with all of the relationships of the properties between the lightguides and the substrate and further disclose or reasonably suggest the lightguides having plural step portions at one end and a vertical face with a reflecting section or diffusing section at the other end.

Claims 7, 13, 19, 25, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to disclose or reasonably suggest an optical transmission device with all of the relationships of the properties between the lightguides and the substrate and further disclose or reasonably suggest the lightguides having plural step portions at one end and a vertical face at the other end and an askew face each for altering a direction of optical signals at both ends.

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449. None of the documents submitted by Applicant discloses or reasonably suggest the allowable subject matter discussed above.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References B and C both disclose substrates and embedded waveguides made of the same material, but none of the documents cited by the Examiner discloses or reasonably suggest the allowable subject matter discussed above.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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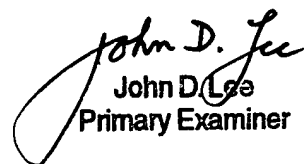
claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M. Lin whose telephone number is (571) 272-2352. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TML


John D. Lee
Primary Examiner